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PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Dahlbäck et al.
SERIAL NUMBER: Not Yet Assigned ART UNIT: Not yet assigned
(Divisional of 08/978,285)
FILING DATE: Herewith EXAMINER: Not yet assigned
TITLE: METHODS AND REAGENTS FOR DETERMINING PROTEIN S

BOX PATENT APPLICATION
Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Applicants submit this preliminary amendment for the above-identified divisional application of U.S. Serial No. 08/978,285, filed pursuant to 37 C.F.R. §1.60, in response to the Examiner's restriction requirement mailed from the U.S. Patent Office on October 26, 1998. Prior to examination, please make the following amendments to the application:

In The Claims

Please cancel claims 1-19. Please add claims 20-32 as follows:

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20. A kit for assaying free protein S, the kit comprising a ligand comprising the extreme N-terminal SCR-module of the β -chain of the C4BP molecule and at least one further reagent required to perform the assay.
 21. The kit of claim 20, comprising the ligand operatively linked to a solid carrier.
 22. The kit of claim 21, wherein the solid carrier is a microtiter plate.
 23. The kit of claim 20 or 21, wherein the kit further comprises a sequence selected from the group consisting of amino acids 13-26 of SEQ ID NO:7 (SGIAQFHIDYNNVS); SEQ.

ID NO:4 (EKGSYYPGSGIAQFHIDYNNVS), residues 13-34 of SEQ ID NO:7 (SGIAQFHIDYNNVSSAEGWHVN) and SEQ. ID. NO:7 (LVTVEKGSYYPGSGIAQFHIDYNNVSSAEGWHVN).

24. A polypeptide comprising an amino acid sequence comprising residues 13-26 of SEQ ID. NO: 7, which polypeptide binds to the binding site for protein S in C4BP and thereby inhibits the binding of protein S to C4BP.

25. A polypeptide comprising an amino acid sequence comprising SEQ. ID NO:4, which polypeptide binds to the binding site for protein S in C4BP and thereby inhibits the binding of protein S to C4BP.

26. A polypeptide comprising an amino acid sequence comprising SEQ. ID NO:7, which polypeptide binds to the binding site for protein S in C4BP and thereby inhibits the binding of protein S to C4BP.

27. An antibody which binds specifically to the region on protein S defined by a sequence selected from the group consisting of SEQ. ID. NO:4, SEQ. ID. NO:7, residues 13-26 of SEQ. ID. NO:7 and residues 13-34 of SEQ. ID. NO:7.

28. An antibody specific for at least part of the extreme N-terminal SCR-module of the β -chain of the C4BP molecule, which does not substantially immunoreact with C4BP bound to protein S.

29. An antibody specific for free protein S, which does not substantially immunoreact with protein S bound to C4BP.

30. The antibody of claim 29, which antibody binds to the region on protein S defined by a sequence selected from the group consisting of SEQ. ID. NO:4, SEQ. ID. NO:7, residues 13-26 of SEQ. ID. NO:7 and residues 13-34 of SEQ. ID. NO:7.

31. A composition for purifying free protein S from an aqueous solution comprising the extreme N-terminal SCR module of the β -chain of the C4BP molecule.